A terrible short bowel story with a happy ending

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To the editor:

A premature male infant, born at 32 weeks of gestation to an 18-year-old mother via normal spontaneous vaginal delivery, was admitted to the neonatal intensive care unit for respiratory distress with a birth weight of 1860 grams (68th percentile). He was intubated for 5 days and supported with continuous positive airway pressure (CPAP) for 1 day. Ampicillin (2x 100mg/kg) and gentamicin (1x 4.5 mg/kg) were started due to congenital pneumonia. During this period, the patient was fed with an orogastric tube and then switched to oral nutrition. On the postnatal day 14, nutritional intolerance and abdominal tension were observed. The child was consulted for surgery. He underwent surgery for necrotizing enterocolitis. During the first operation, widespread ischemia was observed as skip lesions from the distal terminal ileum to the proximal cecum (Figure 1). The surgical site was closed by placing a drain for a second look. Five days later, the Treitz ligament was preserved, and an ileostomy was performed, leaving a total of 45 cm of ileum in reserve. Postoperatively, by the end of the first day , the ileostomy was functioning, but the patient did not tolerate postoperative nutrition for 58 days. During this time, he received parenteral nutrition (PN). Prolonged PN-induced direct bilirubinemia (9 mg/dL) developed. The amount of lipids in PN was reduced to 1 g/kg/day, and lipids containing medium-chain fatty acids were used. ADEK vitamins were started at the appropriate dose, ursodeoxycholic acid was administered (2x10 mg/kg). During follow-up, direct bilirubinemia decreased and returned to normal. On postoperative day 48, the ileostomy was closed. On postoperative day 58, he began to tolerate enteral nutrition. After that, he experienced periods when he could not tolerate enteral nutrition, so TPN could not be discontinued. On postnatal day 146, he tolerated full enteral nutrition (breast milk and fully hydrolyzed formula), and PN was stopped. The patient, whose daily weight gain increased up to 30 grams, whose defecation was of normal consistency, and who was fed orally, was referred to the intestinal center for gastroenterology and pediatric surgical follow-up and was discharged. The discharge weight was 3145 grams (<3rd percentile). The malabsorptive condition known as short bowel syndrome (SBS) can develop as a result of major small intestine surgical resection, disease-related loss of absorption, or congenital surgical malformations [1]. Nearly one-third of all recorded cases are caused by necrotizing enterocolitis [2]. In some publications, this rate can be as high as 49% [3]. Sepsis, cholestasis, intestinal failure, and even death are possible outcomes of short bowel syndrome. The use of PN has enhanced SBS medical care, lowering mortality and improving overall prognosis. However, chronic PN usage is linked to a higher risk of several side effects, such as bloodstream infections, catheter-associated problems, and liver disease [3]. Carefully monitoring nutritional status, avoiding PN and favoring an early introduction of enteral nutrition, as well as preventing, diagnosing, and aggressively treating catheter-associated bloodstream infections and small intestine bacterial overgrowth can all result in a significant improvement in prognosis [4]. A multidisciplinary strategy is used in the treatment of patients with SBS. This approach starts in the neonatal critical care unit and includes nurses, pediatric surgeons, dietitians, pharmacists, and neonatologists. Later on, children transition to an intestinal rehabilitation program.

Figure 1. Skip lesions from the distal terminal ileum to proximal cecum

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